GEI Consultants

October 11, 2007
Project 04516-2

Ms. Irene M. Dale
Environmental Engineer
Bureau of Waste Site Cleanup
Massachusetts Department of Environmental Protection
205B Lowell Street
Wilmington, MA 01887

Geotechnical
Environmental and
Water Resources
Engineering

Dear Ms. Dale:

Re: Immediate Response Action Plan Modification No. 7
50 Tufts Street
Somerville, MA
RTN 3-23246

On behalf of UniFirst Corporation of Wilmington, Massachusetts, we prepared this Immediate Response Action (IRA) Plan Modification No. 7 for the 50 Tufts Street site in Somerville, Massachusetts. This IRA Plan Modification No. 7 addresses activities conducted between August 20, 2007 and September 10, 2007, at the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts. The Massachusetts Department of Environmental Protection (DEP) initially assigned Release Tracking Number (RTN) 3-26114 to the IRA activities associated with the Capuano Center. On July 21, 2007, RTN 3-26114 was linked to the nearby Site at 50 Tufts Street (RTN 3-23246). The Site location is shown in Figure 1 and a Site Plan in Figure 2.

IRA activities were initiated at the Capuano Center on December 27, 2006. A sub-slab depressurization system (SSDS) was installed and began operating at the Capuano Center on February 1, 2007 in order to mitigate chlorinated VOCs detected in indoor air at the Center. This IRA Modification No. 7 addresses activities associated with sealing the joint at the floor slab/foundation wall interface on the southern side of the southwestern classroom wing of the Capuano Center. GEI discussed these IRA activities with you and received your verbal approval on August 16, 2007.

The IRA Transmittal Form (BWSC105) for the IRA Plan Modification No.7 was submitted by eDEP on October 11, 2007and a copy is in Attachment A.

1. CONTACT INFORMATION

Entity Undertaking the IRA
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Vice President of Distribution and Engineering
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Wilmington, MA 01887
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Licensed Site Professional
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400 Unicorn Park Drive
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781.721.4012
LSP License: 9719

2. BACKGROUND

GEI collected monthly indoor air samples as part of the SSDS monitoring program described in the IRA Plan submitted to DEP on April 9, 2007. No chlorinated VOCs were detected above laboratory detection limits in indoor air from February through July 2007.

GEI performed a diagnostic test of the existing SSDS at the Capuano Center on July 21, 2007, as part of an evaluation for the final design parameters and modifications for a permanent SSDS at the Capuano Center. The test consisted of:

- adjusting the SSDS extraction flow rate and vacuum in steps to create various sub-slab air pressure conditions;
- adjusting the heating ventilation and air conditioning (HVAC) system to create various indoor air pressure conditions; and
- measuring the pressure at the six sub-slab monitoring points and the 18 exterior SSDS piping headers during the manipulation of the sub-slab and indoor air pressure conditions.

Environmental Health and Engineering (EH&E) of Newton, Massachusetts monitored the HVAC system and pressure conditions throughout the test. Measurements during the diagnostic test are presented in Table 1 and are summarized below.

Results of the diagnostic test suggested that the influence area of the SSDS was affected by the floor slab/foundation wall joint that runs along the southern wall of the classrooms. The floor slab/foundation wall joint is an approximately ½ inch wide space between the concrete floor slab and the concrete foundation wall. According to the construction plans, it may have been filled with "slab edge filler;" however, based on the SSDS diagnostic test, the joint was not completely sealed.

Based on the results of the SSDS diagnostic test, GEI initiated joint sealing to increase the influence area of the SSDS under the floor slab at the Capuano Center.

3. IRA OBJECTIVES, PLAN, AND SCHEDULE (310 CMR 40.0424[1][E])

3.1. IRA Objectives

The objectives of the IRA Modification No. 7 at the Capuano Center were to:

- Increase the influence area of the SSDS under the floor slab by sealing the floor slab/foundation wall joint in six classrooms (Room 122, 126, 134, 138, 142, and 146).
- Monitor the effect of the joint sealing on sub-slab vacuum and use the results to design final modifications to the SSDS.

3.2. IRA Activities

3.2.1. Completed IRA Activities

IRA activities conducted at the Center between August 20, 2007 and September 10, 2007 included:

3.2.1.1. Expose and Test Floor Joint in Room 138 - August 20-21, 2007

Based on the results of the diagnostic test described in Section 2 of this report, the influence area of SSDS was affected by the floor slab/foundation wall joint. On August 20 and 21, 2007, GEI evaluated conditions in one classroom (Room 138) by observing a contractor cut and remove the bottom several inches of wall board along the south wall of the classroom to expose the floor slab/foundation wall joint, and then performing a diagnostic "smoke test" at the exposed joint.

The smoke test consisted of introducing artificial non-toxic smoke near the floor slab/foundation wall joint while the SSDS was operating. Migration of smoke was observed from the indoor air into the joint. Photographs of the floor slab/foundation wall joint taken by EH&E during unit ventilator repairs in January 2007 are in Attachment B.

3.2.1.2. Floor Slab/Foundation Wall Joint Sealing - August 22-27, 2007

- GEI engaged Concrete Restoration of Winchester, Massachusetts to prepare and seal the floor slab/foundation wall joint in six classrooms (Rooms 122, 126, 134, 138, 142, and 146) in the southern wing of the Capuano Center. The joint sections behind the UV in each classroom were already sealed as part of previous IRA activities conducted between January 29, and February 1, 2007.
- Concrete Restoration cleaned, dried, and removed old sealant and surface contaminants (e.g. oil, grease, and foreign matter) from the floor slab/foundation wall joint and surrounding substrate. Concrete Restoration prepared the joints and cracks to provide a sound bonding surface for the sealant. Concrete Restoration removed dust and other particles using oil-free compressed air.
- Concrete Restoration applied Phenoseal®, a water-based flexible sealant, to seal the floor slab/foundation wall joint and any additional interior cracks which were greater than 0.125 inch wide. A materials specification sheet for Phenoseal® is in Attachment C. GEI estimates that the total length of these joints and cracks was approximately 80 linear feet. Figure 3 shows a plan of the portion of the building affected by the SSDS and the locations of interior and exterior walls. Figures 4 through 6 shows wall sections and construction details of the foundation slab and walls.
- GEI engaged AB Plastering of Quincy, Massachusetts to expose the joint behind the drywall prior to sealing, and repair the drywall and associated wall fittings after sealing was complete.

3.2.1.3. Post-Joint Sealing SSDS Diagnostic Test - August 30, 2007

- GEI conducted a diagnostic test of the current SSDS to evaluate the effect of the floor slab/foundation wall joint sealing and assess final design parameters and modifications for a permanent SSDS. The test was similar to the July 21, 2007 test, and consisted of the same three steps presented in Section 2 of this report. EH&E monitored the HVAC system and pressure conditions throughout the test. Measurements during the diagnostic test are presented in Table 2 and are summarized below.
- Results of the August 2007 diagnostic test suggest that the joint sealing had a positive effect on the ability of the SSDS to create a vacuum under a broader area of the floor slab. In addition, switching the HVAC settings to create negative pressure inside the building did not produce a change in pressure under the slab. Consequently, we believe that the joint sealing has increased the efficacy of the SSDS under a range of potential HVAC configurations.

3.2.1.4. Indoor Air Sampling/Testing

- GEI collected indoor air samples on September 10, 2007 as part of SSDS monitoring activities described in the IRA Plan submitted to DEP on April 9, 2007. GEI collected six indoor air samples and one outdoor sample on the roof downwind of the SSDS effluent exhaust. Data from this sampling event will be presented in the next IRA Status Report.

4. PLANNED IRA ACTIVITIES

Planned IRA activities for the Capuano Center through December 2007 include:

- Specify a design for the permanent system to be installed at the Capuano Center. We have assumed that the likely system will consist of a centralized blower (similar to the current temporary blower), installed on a rooftop or in a permanent structure on the southern side of the Center.
- Evaluate potential sensing and control systems that could be added to the HVAC's current control system and monitored by Center personnel.
- Continue to monitor the effectiveness of mitigation measures, including weekly inspections and monthly monitoring of the SSDS and indoor air testing as described in the IRA Plan dated April 9, 2007. Following the installation of the permanent SSDS blower we will propose a long-term monitoring program to demonstrate the continued effectiveness of the system.

5. PERMITS

No permits were required for IRA Plan Modification No.7 activities conducted from August 20, 2007 through September 10, 2007.

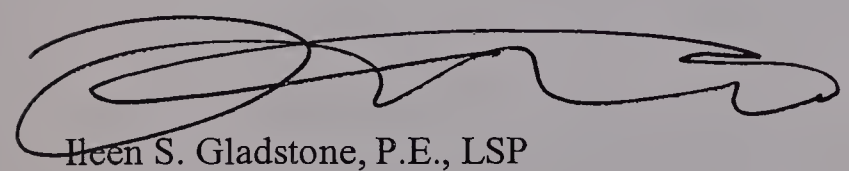
6. REMEDIATION WASTE MANAGEMENT

Remediation waste was not generated as a result of IRA Plan Modification No.7 activities conducted from August 20, 2007 through September 10, 2007.

Please contact me at 781.721.4012 or igladstone@geiconsultants.com if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.



Ileen S. Gladstone, P.E., LSP
Vice President

MCE/ISG:jah
Enclosures

c: John R. Badey, UniFirst Corporation
Peter Mills, City of Somerville

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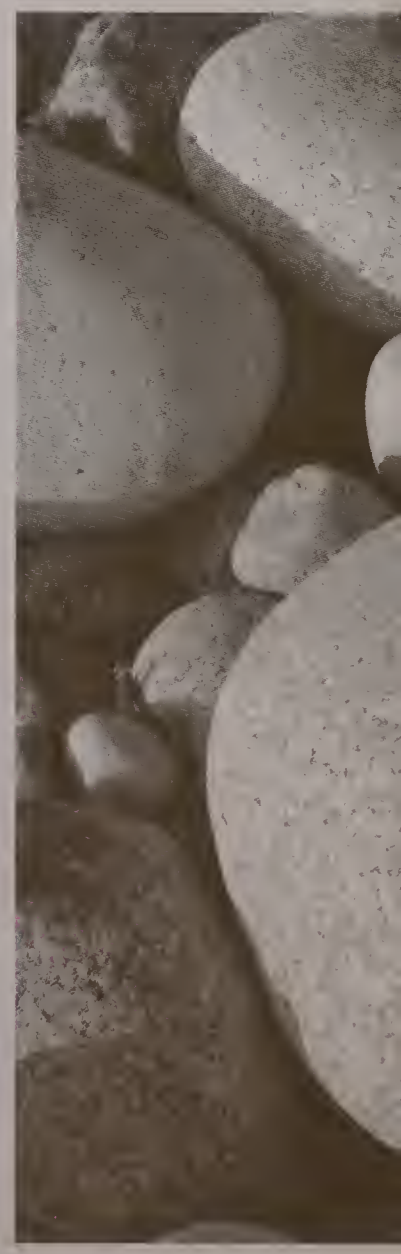

Table 1
SSDS Diagnostic Test Results (Before Slab-Foundation Wall Joint Sealing)
Capuano Center - 150 Glen Street
Somerville, Massachusetts

Monitoring Point	Pre-Test, HVAC - Positive pressure; Vacuum active under all classrooms; Vacuum strength normal		HVAC - Positive pressure; Vacuum active under Room 138 only; Vacuum strength normal[2]	HVAC - Positive pressure; Vacuum active beneath Room 138 only; Vacuum strength increased	HVAC - Negative Pressure; Vacuum active beneath Room 138 only; Vacuum strength increased	HVAC - Negative pressure; Vacuum active under all classrooms; vacuum strength normal	HVAC - Negative pressure; Vacuum active under all classrooms; Vacuum strength normal; Vacuum turned off at each extraction point for measurement
	Vacuum (in w.c.)	PID Reading (ppb)	Vacuum (in.w.c.)	Vacuum (in.w.c.)	Vacuum (in.w.c.)	Vacuum (in. w.c.)	Vacuum (in. w.c.)
Interior							
122A	-0.007	NM[1]	-0.003	NM	NM	-0.007	NM
126A	0.000	545	0.000	NM	NM	0.000	NM
133A	0.000	12200	0.000	-0.003	0.000	0.000	NM
137A	0.000	4248	0.000	0.000	0.000	0.000	NM
142A	0.000	363	0.000	-0.005	0.000	0.000	NM
146A	-0.007	8659	-0.006	NM	NM	0.000	NM
Exterior							
122-1	NM	NM	NM	NM	NM	-0.140	NM
122-2	NM	NM	NM	NM	NM	-0.144	NM
122-3	NM	NM	NM	NM	NM	-0.140	0.000
126-1	NM	NM	0.009	NM	NM	-0.157	-0.027
126-2	NM	NM	0.005	NM	NM	-0.141	NM
126-3	NM	NM	0.018	NM	NM	-0.164	-0.222
134-1	NM	NM	0.022	0.025	-0.012	-0.220	-0.024
134-2	NM	NM	0.024	0.023	-0.027	-0.222	-0.067
134-3	NM	NM	0.023	0.023	-0.032	-0.217	-0.021
138-1	-0.214	NM	-0.212	-5.695	-5.762	-0.225	-0.016
138-2	-0.217	NM	-0.214	-5.711	-5.773	-0.227	-0.032
138-3	-0.215	NM	-0.213	-5.715	-5.775	-0.225	-0.011
142-1	NM	NM	0.017	0.017	-0.023	-0.157	-0.013
142-2	NM	NM	0.025	0.026	-0.013	-0.155	-0.036
142-3	NM	NM	0.013	0.015	-0.009	-0.151	-0.017
146-1	NM	NM	NM	0.015	NM	-0.141	-0.003
146-2	NM	NM	NM	0.029	NM	-0.139	-0.040
146-3	NM	NM	NM	0.028	NM	-0.139	-0.025

General Notes:
1. All readings collected with a Dwyer 75-000-FM digital manometer.
2. HVAC = Heating, Ventilation, and Air Conditioning.
3. NM = Not measured.
4. in. w.c. = inches of water column.
5. PID = Photoionization detector.
6. ppb = parts per billion.

Footnotes:
1. Reading was not taken because the monitoring point was filled with water and the moisture would damage the PID.
2. Opened extraction points 122-1, 122-2, 122-3, 146-1, 146-2, 146-3 to decrease vacuum strength beneath Room 138 to equal vacuum strength under normal operation conditions

Table 2
SSDS Diagnostic Test Results (After Slab-Foundation Wall Joint Sealing)
Capuano Center - 150 Glen Street
Somerville, Massachusetts

Monitoring Point	Pre-Test, no HVAC or Vacuum Alterations		Vacuum and Extraction Point Alterations[2]; No HVAC Alterations	Vacuum and Extraction Point Alterations[2]; HVAC Alterations[3]	Vacuum and Extraction Point Alterations[2]; HVAC Alterations[4]	No Vacuum Alterations[5]; HVAC Alterations[4]; Extraction Point Alterations		No Vacuum, Extraction Point or HVAC Alterations[6]
	Vacuum (in. w.c.)	PID reading (ppb)	Vacuum (in. w.c.)	Vacuum (in. w.c.)	Vacuum (in. w.c.)	Extraction Point OPEN: Vacuum (in. w.c.)	Extraction Point CLOSED: Vacuum (in. w.c.)	Vacuum (in. w.c.)
Interior								
122A	-0.031	122	-0.037	-0.034	-0.033	-0.030	-0.030	-0.030
126A	-0.003	59	0.000	0.000	0.000	0.000	0.000	-0.003
133A	-0.004	2374	0.000	0.000	0.000	0.000	0.000	0.000
137A	0.000	2878	0.000	0.000	-0.003	-0.003	0.000	0.000
142A	-0.006	64	0.000	0.000	0.000	0.000	-0.010	-0.003
146A	-0.011	112	-0.013	-0.003	-0.010	-0.009	-0.009	-0.010
Exterior								
122-1	-0.233	NM	NM	NM	NM	-0.250	-0.012	-0.221
122-2	-0.242	NM	NM	NM	NM	-0.255	-0.022	-0.242
122-3	-0.229	NM	NM	NM	NM	-0.247	-0.008	-0.233
126-1	-0.256	NM	NM	NM	NM	-0.271	-0.016	-0.263
126-2	-0.216	NM	0.006	-0.004	-0.01	-0.235	-0.012	-0.221
126-3	-0.273	NM	0.015	-0.005	-0.015	-0.287	-0.028	-0.196
134-1	-0.351	NM	0.012	-0.015	-0.023	-0.385	-0.029	-0.358
134-2	-0.366	NM	0.006	-0.009	-0.027	-0.377	-0.058	-0.369
134-3	-0.341	NM	0.008	-0.016	-0.02	-0.358	-0.062	-0.326
138-1	-0.364	NM	-0.399	-0.405	-0.417	-0.399	-6.977 *	-0.379
138-2	-0.371	NM	-0.412	-0.397	-0.422	-0.383	-6.986 *	-0.369
138-3	-0.478	NM	-0.396	-0.403	-0.41	-0.379	-6.986 *	-0.371
142-1	-0.276	NM	-0.011	-0.010	-0.024	-0.299	-0.042	-0.266
142-2	-0.268	NM	-0.009	-0.024	-0.031	-0.288	-0.034	-0.261
142-3	-0.253	NM	-0.006	-0.026	-0.019	-0.263	-0.033	-0.253
146-1	-0.240	NM	0.000	-0.019	-0.014	-0.269	-0.008	-0.235
146-2	-0.226	NM	NM	NM	NM	-0.247	-0.024	-0.256
146-3	-0.237	NM	NM	NM	NM	-0.264	-0.019	-0.247

General Notes:

1. All vacuum readings collected with a Dwyer 475-000-FM digital manometer.
2. HVAC = Heating, Ventilation, and Air Conditioning.
3. NM = Not measured.
4. in. w.c. = Inches of water column.
5. PID = Photoionization detector.
6. ppb = parts per billion.
7. * = Vacuum is estimated because Dwyer 475-000-FM manometer is less sensitive above 1.000 inch of water column.

Footnotes:

1. Closed extraction points and opened dilution valve on blower, but vacuum did not decrease appreciably in Room 138. Opened extraction points
2. 122-1, 122-2, 122-3, 146-1, and 146-2 to decrease vacuum beneath Room 138.
3. HVAC settings adjusted to "worst case scenario" i.e. negative pressure. Indoor air pressure was approximately -0.010, which was lower than during the previous diagnostic test.
4. HVAC settings re-adjusted to "worst case scenario" i.e. negative pressure. Indoor air pressure was approximately -0.020, which was cosnistent with the previous diagnostic test.
5. Blower dilution valve remained closed. Vacuum measurments collected with extraction points open and closed.
6. System was returned to it's original configuration: positive pressure, all extraction points open, dilution valve closed.

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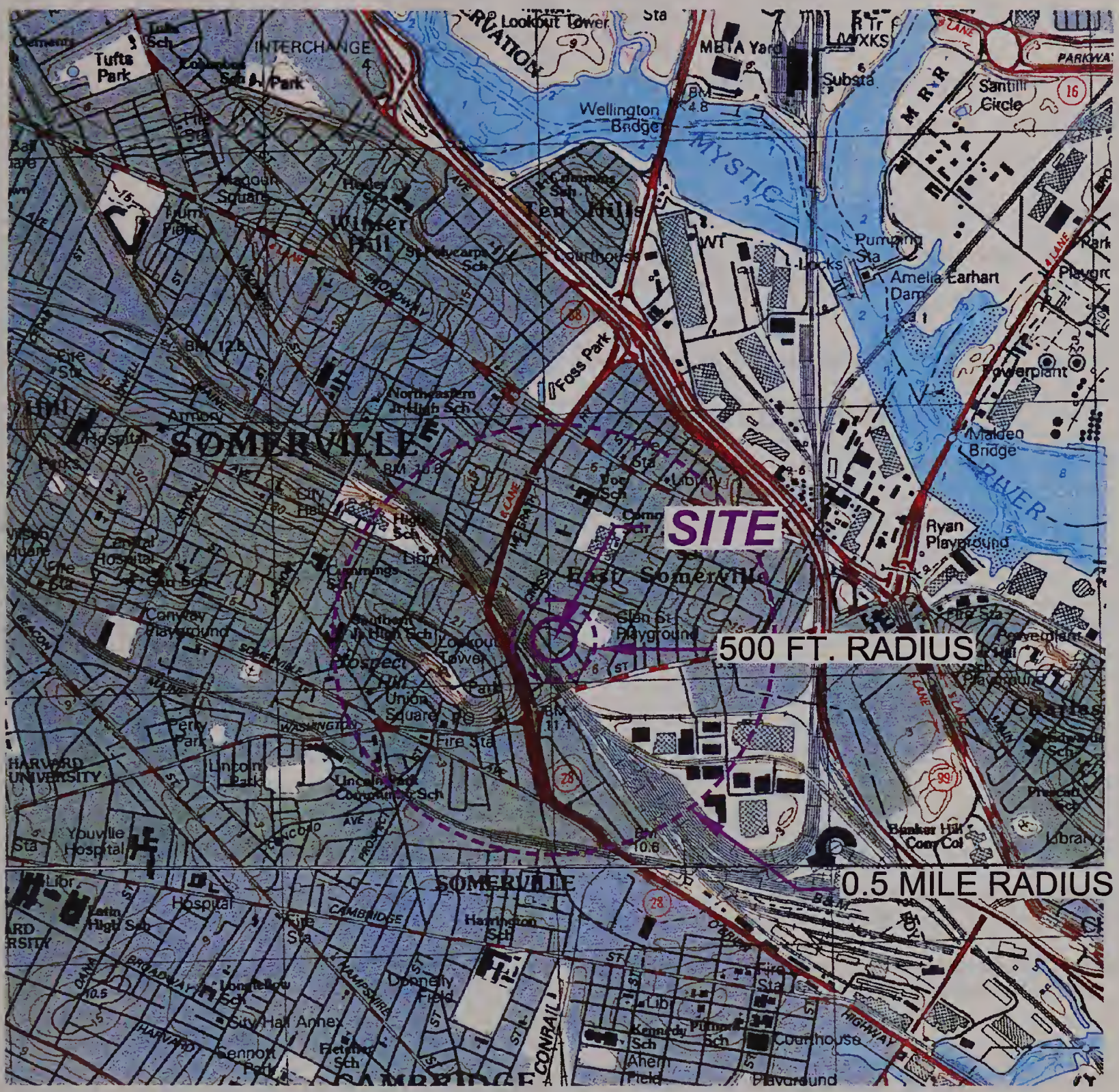


0 1000 2000 4000 6000

SCALE, FEET

This Image provided by MassGIS is taken from
U.S.G.S. Topographic 7.5 X 15 Minute Series
Boston North, MA Quadrangle, 1985.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.

Immediate Response Action Modification No. 7 Michael E. Capuano Early Childhood Center Somerville, Massachusetts	GEI Consultants	SITE LOCATION MAP
UniFirst Corporation Wilmington, Massachusetts	Project 04516-2	October 2007 Fig. 1

LEGEND:

- MONITORING WELL WITH SOIL GAS SAMPLE PORT INSTALLED BY GEI, JANUARY - AUGUST 2007
- MONITORING WELL INSTALLED BY SANBORN HEAD ASSOCIATES, 2002
- MONITORING WELL INSTALLED BY GEOINSIGHT, JUNE 2004
- SOIL BORING ADVANCED BY GEOINSIGHT, AUGUST 2004
- MONITORING WELL INSTALLED BY GEI, MAY 2006 - AUGUST 2007
- MONITORING WELL INSTALLED PREVIOUSLY, DATE UNKNOWN
- APPROXIMATE SURFACE SOIL SAMPLE LOCATION COLLECTED BY GEI, MARCH 2007
- CHAIN LINK FENCE
- 138 ROOM NUMBER AT CAPUANO SCHOOL
- BOUNDARY OF COMMUNITY GARDENS

GENERAL NOTES:

1. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
2. VERTICAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
3. STREET AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
4. EXISTING MONITORING WELL LOCATIONS AND ELEVATIONS WERE ESTABLISHED BY AN ON THE GROUND SURVEY BY BSC GROUP, INC. ON MAY 31, 2006, MARCH 16-20, 2007, JULY 2007, AND SEPTEMBER 2007. PVC AND GROUND ELEVATIONS WERE ESTABLISHED BY TRIGONOMETRIC METHODS USING A TOTAL STATION.
5. CAPUANO CENTER COMMUNITY GARDEN LOCATIONS WERE ESTABLISHED BY AN ON THE GROUND SURVEY BY BSC GROUP, INC. IN JULY 2007.

0 150 300

SCALE, FEET

Immediate Response Action Modification No. 7
Michael E. Capuano Early Childhood Center
Somerville, Massachusetts

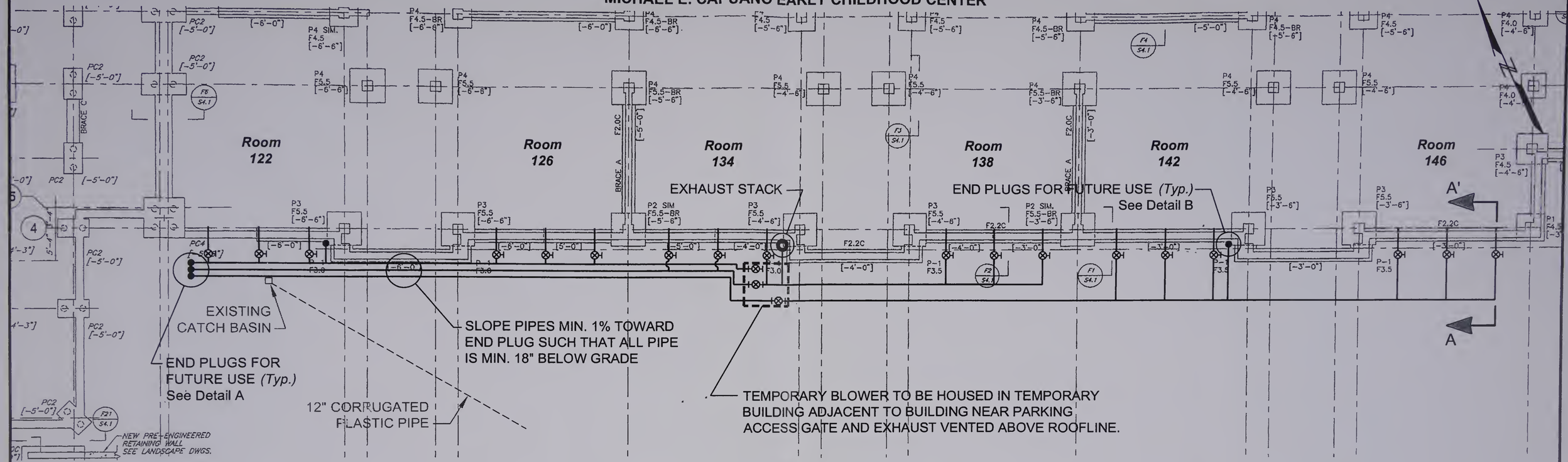
UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE PLAN

Project 04516-2 | October 2007 | Fig. 2

MICHAEL E. CAPUANO EARLY CHILDHOOD CENTER



PLAN
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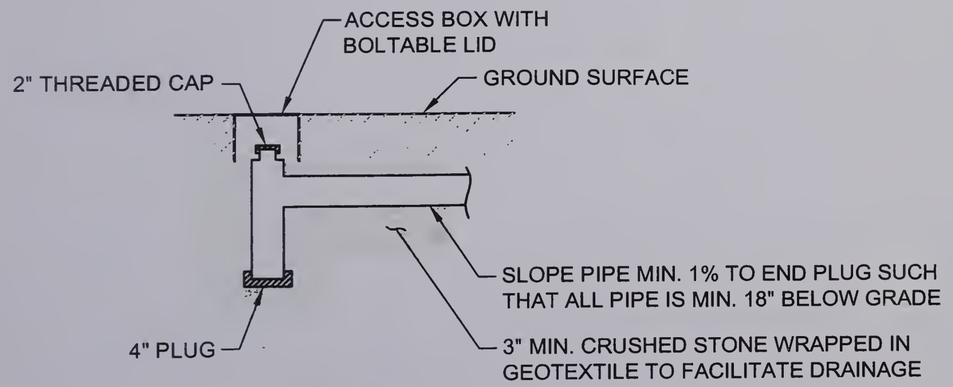
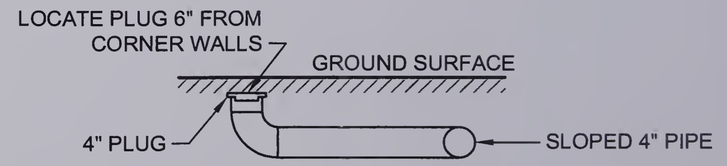


DETAIL A
Not To Scale

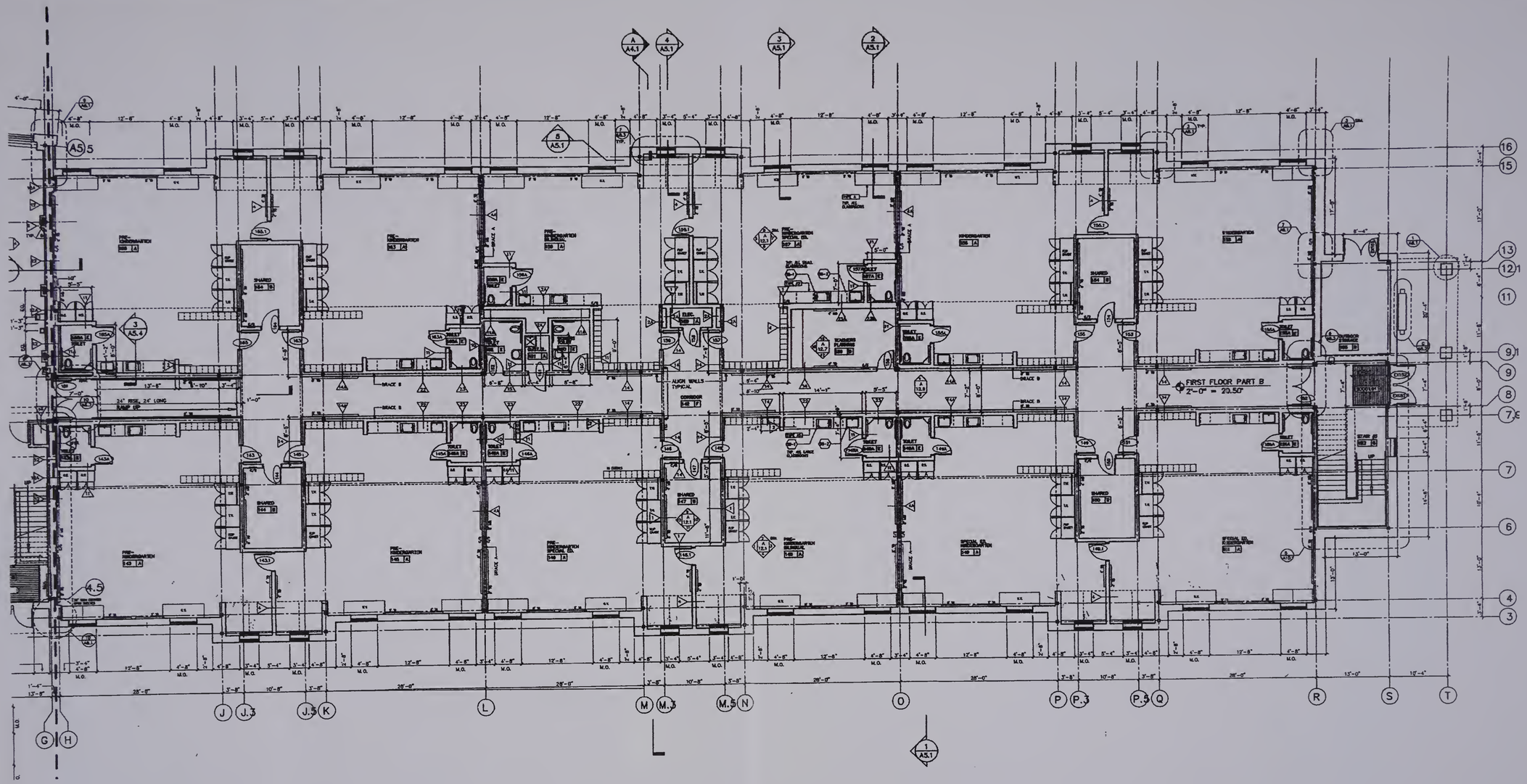


DETAIL B
Not To Scale

NOTES:

1. FOR SECTION A-A SEE FIG. 14.
2. BASE PLAN FROM FIGURE TITLED "EDGERLY EARLY CHILDHOOD DEVELOPMENT CENTER SOMERVILLE, MASSACHUSETTS FOUNDATION PLAN - PART B" BY HMFH ARCHITECTS DATED 08/10/2001.
3. BASE PLAN HAS BEEN MODIFIED BY GEI TO SHOW THE APPROXIMATE LOCATION OF THE SSDS COMPONENTS

IRA Plan Modification No. 7 Michael E. Capuano Early Childhood Center Somerville, Massachusetts	GEI Consultants	SSDS EXTERIOR PIPING SCHEMATIC
UniFirst Corporation Wilmington, Massachusetts	Project 04516-2	October 2007 Fig. 3

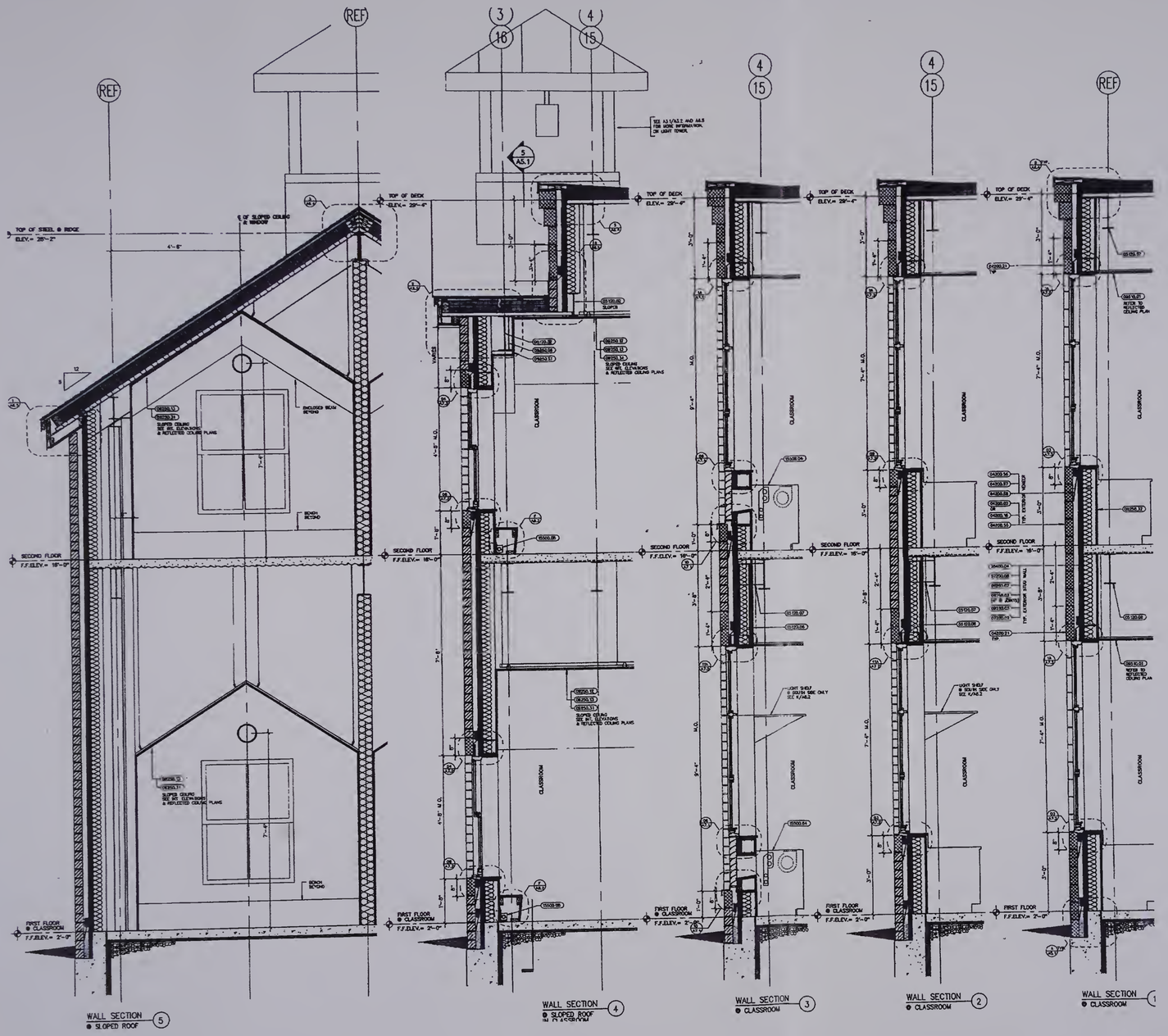


(Not To Scale)

NOTES:

1. FOR SECTIONS 1 THROUGH 5, SEE FIG. 4.
2. BASE PLAN FROM FIGURE TITLED "EDGERLY EARLY CHILDHOOD DEVELOPMENT CENTER, SOMERVILLE, MASSACHUSETTS, FIRST FLOOR PLAN - PART B" BY HMFH ARCHITECTS DATED 08/10/01.
3. BASE PLAN HAS BEEN MODIFIED BY GEI TO BETTER SHOW THE LOCATION OF THE WALL SECTIONS.
4. THIS VIEW DOES NOT INCLUDE THE ROOM FINISH SCHEDULE, ROOM SYMBOL KEY, KEYNOTES, KEY PLAN, GENERAL NOTES, FINISH NOTES, OR ABBREVIATIONS.

IRA Plan Modification No. 7 Michael E. Capuano Early Childhood Center Somerville, Massachusetts	GEI Consultants	FIRST FLOOR PLAN - SOUTHERN WING
UniFirst Corporation Wilmington, Massachusetts	Project 04516-2	October 2007 Fig. 4

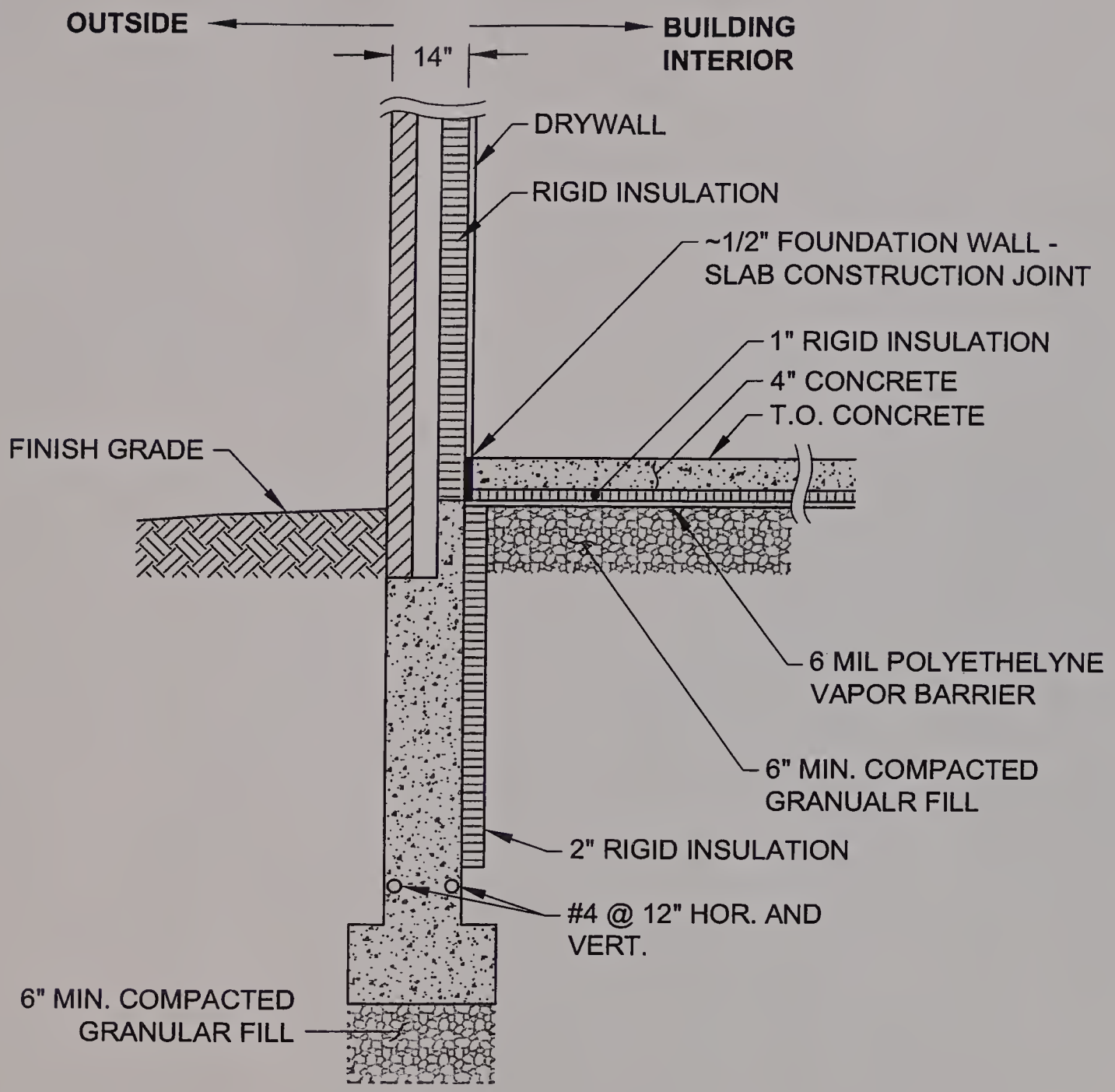


(Not To Scale)

NOTES:

1. FOR SECTION PLAN, SEE FIG. 4.
2. BASE PLAN FROM FIGURE TITLED "EDGERLY EARLY CHILDHOOD DEVELOPMENT CENTER, SOMERVILLE, MASSACHUSETTS, WALL SECTIONS" BY HMFH ARCHITECTS DATED 8/10/01.

IRA Plan Modification No. 7 Michael E. Capuano Early Childhood Center Somerville, Massachusetts	GEI Consultants	WALL SECTIONS
UniFirst Corporation Wilmington, Massachusetts	Project 04516-2	October 2007 Fig. 5



NOTES:

1. BASE PLAN, MODIFIED BY GEI, FROM FIGURE TITLED "EDGERLY EARLY CHILDHOOD DEVELOPMENT CENTER SOMERVILLE, MASSACHUSETTS FOUNDATION SECTIONS" BY HMFH ARCHITECTS DATED 08/10/2001.

Not To Scale

IRA Plan Modification No.7 Michael E. Capuano Early Childhood Center Somerville, Massachusetts	GEI Consultants	FOUNDATION WALL - SLAB CONSTRUCTION JOINT DETAIL
UniFirst Corporation Wilmington, Massachusetts	Project 04516-2	October 2007 Fig. 6

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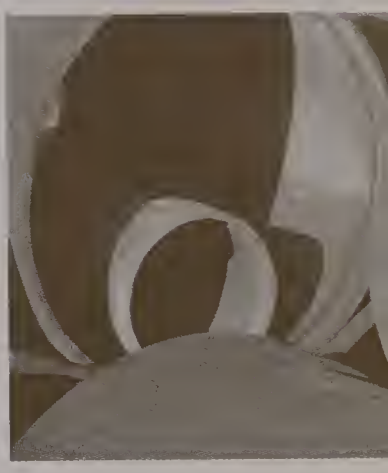

ATTACHMENT A

Immediate Response Action (IRA) Transmittal Form
(BWSC105)

Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username:	**HBALLANTYNE**
Transaction ID:	**147208**
Document:	**BWSC 105 IRA**
Size of File:	**140.944 K**
Status of Transaction:	**SUBMITTED**
Date and Time Created:	**10/11/2007::11:41:23 AM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to “Download a Copy” from the Current Submittals page.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC105

IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: 50 TUFTS ST & PROP ACROSS THE ST

2. Street Address: 50 TUFTS ST

3. City/Town: SOMERVILLE 4. ZIP Code: 02145-4129

5. UTM Coordinates: a. UTM N: 4694322 b. UTM E: 328049

☑ 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
☐ a. Tier IA ☐ b. Tier IB ☑ c. Tier IC ☐ d. Tier II

☐ 7. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114. Specify Program (check one):
☐ a. CERCLA ☐ b. HSWA Corrective Action ☐ c. Solid Waste Management
☐ d. RCRA State Program (21C Facilities)

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): 1/9/2006 (mm/dd/yyyy)

☐ 2. Submit an **Initial IRA Plan**.

☑ 3. Submit a **Modified IRA Plan** of a previously submitted written IRA Plan.

☐ 4. Submit an **Imminent Hazard Evaluation**. (check one)
☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.
☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.
☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.
☐ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

☐ 5. Submit a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard**.

☐ 6. Submit an **IRA Status Report**.

☐ 7. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report
b. Frequency of Submittal: (check all that apply)
☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
☐ iii. A Remedial Monitoring Report(s) submitted concurrent with a IRA Status Report.
c. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

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B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 8. Submit an **IRA Completion Statement.**

☐ a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN). When linking RTNs, rescoring via the NRS is required if there is a reasonable likelihood that the addition of the new RTN(s) would change the classification of the site.

b. Provide Release Tracking Number of Tier Classified Site (Primary RTN): ☐ - ☐

These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.

☐ 9. Submit a **Revised IRA Completion Statement.**

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

1. Identify Media Impacted and Receptors Affected: (check all that apply)

☑ a. Air ☑ b. Basement ☑ c. Critical Exposure Pathway ☑ d. Groundwater ☑ e. Residence

☐ f. Paved Surface ☐ g. Private Well ☐ h. Public Water Supply ☑ i. School ☐ j. Sediments

☐ k. Soil ☐ l. Storm Drain ☐ m. Surface Water ☐ n. Unknown ☐ o. Wetland ☐ p. Zone 2

☐ q. Others Specify: _____

2. Identify Oils and Hazardous Materials Released: (check all that apply)

☐ a. Oils ☑ b. Chlorinated Solvents ☐ c. Heavy Metals

☐ d. Others Specify: _____

_____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

☐ 1. Assessment and/or Monitoring Only
☐ 2. Temporary Covers or Caps
☐ 3. Deployment of Absorbent or Containment Materials
☐ 4. Temporary Water Supplies
☐ 5. Structure Venting System
☐ 6. Temporary Evacuation or Relocation of Residents
☐ 7. Product or NAPL Recovery
☐ 8. Fencing and Sign Posting
☐ 9. Groundwater Treatment Systems
☑ 10. Soil Vapor Extraction
☐ 11. Bioremediation
☐ 12. Air Sparging

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D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☑ 13. Excavation of Contaminated Soils

☑ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____

☑ ii. Off Site Estimated volume in cubic yards 61

iia. Receiving Facility: STABLEX CANADA Town: BLAINVILLE State: MA

iib. Receiving Facility: _____ Town: _____ State: _____

iii. Describe: FACILITY IN BLAINVILLE, QUEBEC J7C 3V4, CANADA

☐ b. Store ☐ i. On Site Estimated volume in cubic yards _____

☐ ii. Off Site Estimated volume in cubic yards _____

iia. Receiving Facility: _____ Town: _____ State: _____

iib. Receiving Facility: _____ Town: _____ State: _____

☐ c. Landfill

☐ i. Cover Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ ii. Disposal Estimated volume in cubic yards _____

Receiving Facility: _____ Town: _____ State: _____

☐ 14. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____ Town: _____ State: _____

c. Receiving Facility: _____ Town: _____ State: _____

☑ 15. Removal of Other Contaminated Media:

a. Specify Type and Volume: SPENT GRANULAR ACTIVATED CARBON; 8,000 LBS

b. Receiving Facility: RINECO Town: BENTON State: AR

c. Receiving Facility: _____ Town: _____ State: _____

☑ 16. Other Response Actions:

Describe: TEMPORARY AIR PURIFIERS; SUB-SLAB DEPRESSURIZATION SYSTEMS

☐ 17. Use of Innovative Technologies:

Describe: _____

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Release Tracking Number
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E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B of this form indicates that an* ***Immediate Response Action Plan*** *is being submitted*, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that an* ***Imminent Hazard Evaluation*** *is being submitted*, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> *if Section B of this form indicates that an* ***Immediate Response Action Status Report*** *and/or a* ***Remedial Monitoring Report*** *is(are) being submitted*, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that an* ***Immediate Response Action Completion Statement*** *or a request to* ***Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard*** *is being submitted*, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9719

2. First Name: ILEEN S 3. Last Name: GLADSTONE

4. Telephone: 7817214012 5. Ext.: 6. FAX:

7. Signature: ILEEN S GLADSTONE

8. Date: 10/11/2007
(mm/dd/yyyy)

9. LSP Stamp:

Commonwealth of Massachusetts
Electronic Seal
Licensed Site Professional

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

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IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number: 3 - 23246

F. PERSON UNDERTAKING IRA:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☑ c. change in the person undertaking response actions

2. Name of Organization: UNIFIRST CORP.

3. Contact First Name: JOHN R. 4. Last Name: BADEY

5. Street: 68 JONSPIN ROAD 6. Title: VICE PRESIDENT OF ENGINEERING

7. City/Town: WILMINGTON 8. State: MA 9. ZIP Code: 01887-0000

10. Telephone: 800 3477880 11. Ext.: 578 12. FAX:

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: OTHER PRPS

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking IRA Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.

☐ a. A Release Abatement Measure (RAM) Plan (BWSC106) ☐ b. Phase IV Remedy Implementation Plan (BWSC108)

☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☑ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.

☐ 5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to the DEP Regional Office.

☑ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
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IMMEDIATE RESPONSE ACTION (IRA) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number
3 - 23246

I. CERTIFICATION OF PERSON UNDERTAKING IRA:

1. I, JOHN R. BADEY, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: JOHN R. BADEY (Signature) 3. Title: VICE PRESIDENT OF ENGINEE

4. For: UNIFIRST CORP. (Name of person or entity recorded in Section F) 5. Date: 10/11/2007 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on

10/11/2007 11:36:07 AM

GEI Consultants

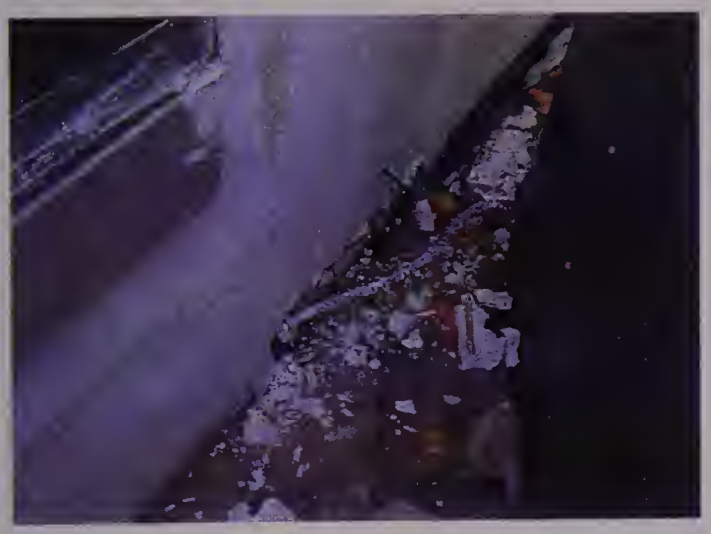
Geotechnical
Environmental and
Water Resources
Engineering

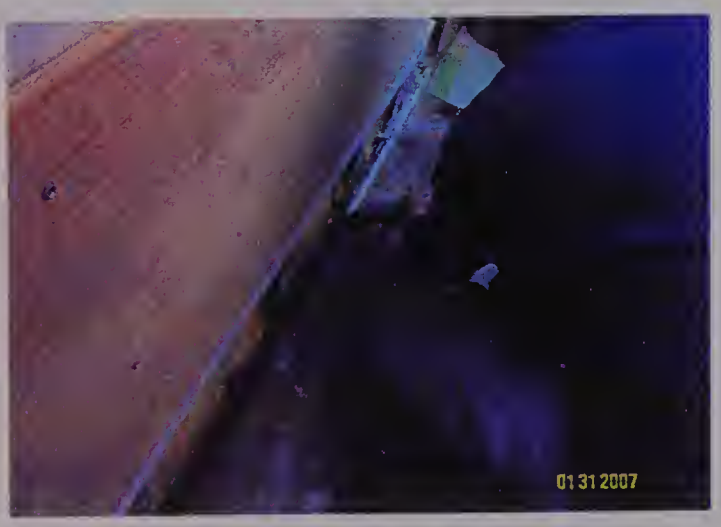
ATTACHMENT B

EH&E Photographs of the Floor Slab/Foundation Wall Joint

Michael E. Capuano Early Childhood Center

Unit Ventilator Sealing: January – February 2007





Photographs taken by EH&E in January and February 2007.

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

ATTACHMENT C
Phenoseal Technical Bulletin

Technical Bulletin

2400 Boston Street, Suite 200, Baltimore, Maryland 21224
Phone: 800-343-8963 or 800-543-3840

Revised: 08/23/04

Phenoseal® Vinyl Adhesive Caulk Does It All!®
Translucent – VOC Compliant Formula

- Indoor/Outdoor Use
- Kitchen, Bath, Windows, Doors & Trim
- Fast-drying
- Cured Caulk is Mildew Resistant
- Paintable
- Easy water clean-up
- Lifetime Guarantee

Packaging: 5.5 fluid ounce (163mL) squeeze tube, 10 fluid ounce (296mL) cartridge
Colors: Translucent
UPC Numbers: 0-51136-00006, 00624, 01101, 27116

Company Identification:

Manufacturer: Gloucester Co., Inc. a subsidiary of DAP Inc., 2400 Boston St., Baltimore, Maryland 21224
Usage Information: 800-343-4963, 9:00 am to 7:00 pm EST.
Order Information: 800-343-4963
Fax Number: 410-779-2085

Product Description:

Phenoseal® Vinyl Adhesive Caulk is a premium-grade, all-purpose adhesive caulk that can be used for interior and exterior applications. It bonds, caulks or seals most common building materials. It provides a durable, weatherproof seal by preventing air and moisture from passing through cracks and joints. It is fast drying and cured caulk is mildew resistant. Phenoseal® Vinyl Adhesive Caulk can be painted over with latex and oil-based paints and it cleans up easily with soap and water.

Suggested Uses:

- *Set or replace loose floor or wall tiles.*
- *Caulk around metal/glass shower frames.*
- *Adhere soap dishes and other small bathroom wall fixtures.*
- *Install sinks in countertops.*
- *Glue miter joints.*
- *Bond and seal backsplash to countertop.*
- *Reinforce nailed or screwed joints.*

- *Install cork or bulletin board on walls.*
- *Cement wood studs to masonry.*
- *Caulk chimney and gable flashing.*
- *Adhere new baseboard moldings.*
- *Fill cracks in cellar walls and floors.*
- *Bond and caulk metal thresholds or metal tracks for sliding doors to flagstone or concrete floors.*
- *Repair broken masonry.*

Adheres to:

- *Wood*
- *Concrete & masonry*
- *Brick*
- *Glass*
- *Aluminum*
- *Vinyl*
- *Metal*
- *Fiberglass*
- *Plaster, drywall and painted surfaces*
- *Foamboard*

Surface Preparation & Application:

1. Surface must be clean, dry and free of all old caulk, dirt, dust, grease and debris.
2. Remove cap (from tube). Cut nozzle at 45° angle to desired bead size.
3. Load into caulking gun if using the 10 fl. oz.cartridge.
4. Apply product, pushing caulk ahead of nozzle and making sure it comes in contact with application surfaces.
5. For a neat finish, smooth the bead of caulk with a finishing tool.
6. Clean up excess caulk with a damp sponge before it skins over (15 minutes).
7. Caulk will cure in 12 to 48 hours, depending on joint depth, temperature and humidity.
8. Allow caulk to fully cure and dry clear before painting with latex or oil-based paints.
9. **Translucent color may whiten when exposed to water, but clarity will return after drying. Quality will not be affected.**
10. Reseal for storage and reuse.

For Best Results:

- Caulk in temperatures above 45°F.
- Do not apply when rain or freezing temperatures is forecasted before full cure can occur. Cold weather and high humidity will slow down cure time.
- Do not use for marine or automotive applications or below waterline.
- Do not use for filling butt joints, surface defects or for tuck-pointing. Not for use between two non-porous surfaces or with mirrors.
- Joint size should not exceed 1/4" wide x 1/4" deep. If joint depth exceeds 1/4", use backer rod material.
- **Caulk applies white and dries translucent in 7 days (depending on joint depth, temperature and humidity).**
- Store caulk away from extreme heat or cold.

Physical & Chemical Characteristics:

Vehicle:	Water
Polymer Type:	Vinyl Acetate Homopolymer
Weight per Gallon:	9.2 ±.2.0 lbs./gal.
Solids:	58%± 2.0
VOC Content:	VOC less water, less exempt solvent: <80 gm/l (<4%)
Odor:	Slight, pleasant
Full Cure:	48 hours under normal conditions
Application Temperature Range:	45°F and above
Service Temperature Range:	-20°F to 100°F

Storage Temperature Range:	40°F to 100°F
Freeze Thaw Stability:	Passes 5 Cycles @ 0°F
Dynamic Joint Movement:	12.5
Flash Point:	None
Shelf Life:	12 Months
Coverage:	10 fl. oz.: 12 linear feet (3.7m) at a joint width & depth of 3/8" (9.5mm) 5.5 fl. oz.: 6.6 linear feet (2.0m) at a joint width & depth of 3/8" (9.5mm)
Tooling Time:	20 minutes
Tack Free Time:	30 minutes
MSDS No:	00061016

Clean Up:
Clean up excess uncured caulk with a damp sponge before it skins over (15 minutes). Wash hands with warm water and soap. Dried caulk must be cut or scraped away.

Safety:
See product label and Material Safety Data Sheet for safety information. You can request an MSDS by visiting www.dap.com or www.phenoseal.com or by calling 800-343-4963.

LIFETIME GUARANTEE: Gloucester Co., Inc. warrants the performance of this product for sealant purposes during the lifetime of the home. If product ever fails to perform, return container & receipt to DAP/Gloucester Co., 2400 Boston Street, Baltimore, MD 21224 for product replacement or sales price refund. Warranty does not extend to commercial use & is limited to refund or replacement. Neither seller nor manufacturer shall be liable for any injury, loss, or damage direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for intended use.

An RPM Company

Geotechnical
Environmental and
Water Resources
Engineering